

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

ART+COM Innovationpool GmbH,

Plaintiff,

v.

GOOGLE INC.,

Defendant.

Civil Action No. 14-217-RGA

MEMORANDUM OPINION

Brian E. Farnan, Esq., Michael J. Farnan, Esq., Farnan LLP, Wilmington, DE; Scott F. Partridge, Esq. (argued), L. Gene Spears, Esq. (argued), Ryan Pinckney, Esq. (argued), Baker Botts L.L.P., Houston, TX, attorneys for Plaintiff.

Jack B. Blumenfeld, Esq., Paul Saindon, Esq., Morris, Nichols, Arsht & Tunnell LLP, Wilmington, DE; Cono A. Carrano, Esq. (argued), David C. Vondle, Esq., Ashraf A. Fawzy, Esq., Akin Gump Strauss Hauer & Feld LLP, Washington, D.C., attorneys for Defendant.

June 26, 2015

  
**ANDREWS, U.S. DISTRICT JUDGE:**

Presently before the Court is the issue of claim construction of multiple terms in U.S. Patent No. RE44,550 (“the ’550 patent”). The Court has considered the Parties’ Joint Claim Construction Brief. (D.I. 84). The Court heard oral argument on several terms on May 12, 2015. The remaining terms were submitted on the papers. (Tr. 145).<sup>1</sup>

## **I. BACKGROUND**

Plaintiff ART+COM Innovationpool GmbH filed this patent infringement action against Google Inc. on February 20, 2014. Plaintiff alleges that Defendant infringes the ’550 patent. The ’550 patent is a reissue of U.S. Patent No. RE41,428, which is a reissue of U.S. Patent No. 6,100,897.

## **II. LEGAL STANDARD**

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). “[T]here is no magic formula or catechism for conducting claim construction.’ Instead, the court is free to attach the appropriate weight to appropriate sources ‘in light of the statutes and policies that inform patent law.’” *SoftView LLC v. Apple Inc.*, 2013 WL 4758195, at \*1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977–80 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996). Of these sources, “the specification is always highly relevant to the claim construction analysis. Usually,

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<sup>1</sup> Citations to “Tr.” refer to the transcript of the oral argument held on May 12, 2015.

it is dispositive; it is the single best guide to the meaning of a disputed term.” *Phillips*, 415 F.3d at 1315 (internal quotation marks and citations omitted).

“[T]he words of a claim are generally given their ordinary and customary meaning. . . . [Which is] the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” *Id.* at 1312–13 (internal quotation marks and citations omitted). “[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Id.* at 1314 (internal citations omitted).

When a court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court’s construction is a determination of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which “consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” *Phillips*, 415 F.3d at 1317–19 (internal quotation marks and citations omitted). Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

“A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent.” *Renishaw PLC v. Marposs Societa’ per*

*Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that “a claim interpretation that would exclude the inventor’s device is rarely the correct interpretation.” *Osram GmbH v. Int’l Trade Comm’n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (internal quotation marks and citation omitted).

### III. CONSTRUCTION OF DISPUTED TERMS

Claim 1 is representative and reads:

1. A method of providing a pictorial representation of space-related data of a selectable object, the representation corresponding to a view of the object by an observer with a selectable location and a selectable direction of view comprising:
  - (a) providing a plurality of spatially distributed data sources for storing space-related data;
  - (b) determining a field of view including an area of the object to be represented through a selection of a distance of the observer to the object and an angle of view of the observer to the object;
  - (c) requesting data for the field of view from at least one of the plurality of spatially distributed data sources;
  - (d) centrally storing the data for the field of view;
  - (e) representing the data for the field of view in a pictorial representation having one or more sections;
  - (f) using a computer, dividing each of the one or more sections having image resolutions below a desired image resolution into a plurality of smaller sections, requesting higher resolution space-related data for each of the smaller sections from at least one of the plurality of spatially distributed data sources, centrally storing the higher resolution space-related data, and representing the data for the field of view in the pictorial representation; and
  - (g) repeating step (f), dividing the sections into smaller sections, until every section has the desired image resolution or no higher image resolution data is available.

#### 1. “centrally storing the data for the field of view”

- a. *Plaintiff’s proposed construction*: storing requested data for the field of view in memory at the location of the request
- b. *Defendant’s proposed construction*: storing the field of view data such that it is accessible by a plurality of networked display devices

- c. *Court's construction*: storing requested data for the field of view in memory at the location of the request

Plaintiff argues that Defendant's construction adds a limitation and excludes an embodiment disclosed in the specification. (D.I. 84 at p. 5; Tr. 7). Plaintiff maintains that nothing in the specification requires that the central storage be accessible by a plurality of networked devices. (Tr. 11). To the contrary, Plaintiff argues that Figure 2 of the patent discloses a central storage that is at the user's location and connected to "the display device," not multiple display devices. (D.I. 84 at pp. 5-6 (quoting '550 patent, col. 8, ll. 2-3)). Plaintiff further argues that the specification supports that the central storage is at the location of the request. (*Id.* at pp. 10-11). For instance, the specification gives examples of storage requirements for the central memory that are consistent with storage at the requesting machine. (Tr. 15).

Defendant responds that Figure 1 of the patent displays some central memories (nodes 1 and 2) that are connected to multiple devices. (D.I. 84 at pp. 6-7). Defendant also argues that its construction does not exclude Figure 2 because, while the central storage node there depicted (node 3) is directly connected to only one display device, a person of skill in the art would understand that it is indirectly networked to other devices. (*Id.* at p. 8). Defendant maintains that its construction captures the "big picture of what the claim is calling for," namely, displaying space-related data. (Tr. 24).

I do not think that the claim requires that the central storage be accessible by a plurality of devices. The patent discloses node 3 as a central memory. ('550 patent, col. 6, l. 20). The specification states, "The tertiary node 3 has only one connection to the display unit 5 and to the interchange network 7." ('550 patent, col. 6, ll. 43-44). Defendant's construction would exclude that embodiment. Node 3 is also what requests data from the distributed data sources. ('550

patent, col. 7, ll. 61-63 (“[T]he node 3 determines the field of view of the observer and calls up the data via the interchange network 7 and the nodes 1 and 2.”)). That is to say, the computer that requests the data then centrally stores it. I will therefore construe “centrally storing the data for the field of view” as “storing requested data for the field of view in memory at the location of the request.”

## 2. “image resolutions”

- a. *Plaintiff’s proposed construction*: plural of “the level of detail or spatial precision contained in an image”
- b. *Defendant’s proposed construction*: Indefinite
- c. *Court’s construction*: plural of “the level of detail or spatial precision contained in an image”

The parties agree that the singular form of “image resolution” should be construed as “the level of detail or spatial precision contained in an image.” (D.I. 84 at p. 16). The dispute centers on the plural of the term. Defendant argues that “image resolutions” is indefinite because the claim recites “dividing each of the one or more sections having image resolutions below a desired image resolution into a plurality of smaller sections.” (*Id.* (quoting ’550 patent, col. 10, ll. 33-35)). Defendant contends that the claim requires a single section to have multiple image resolutions. (*Id.*). Defendant argues that a person of ordinary skill in the art “would not understand how a single section could have more than one image resolution in view of the disclosure in the intrinsic record.” (*Id.* at p. 18). Defendant maintains that the focus should be on what a person of skill would understand, not “a plain English understanding.” (Tr. 37-38).

Plaintiff responds that a person of skill—or any English speaker—would understand that each section has one image resolution. (Tr. 33). If there are multiple sections, there could be multiple image resolutions. (D.I. 84 at p. 16). Plaintiff notes that, if someone were told to build

“one or more snowmen having top hats,” it would be clear that each snowman has a single top hat. (*Id.* at 17). Similarly, Plaintiff argues that each section has one image resolution. (*Id.*).

I agree with Plaintiff that the language does not call for a single section to have multiple image resolutions. It is perfectly clear that each section has one image resolution, and the plural is used to account for the fact that there can be multiple sections. Defendant’s argument attempts to manufacture an ambiguity where the plain English is clear. I am not persuaded by Defendant’s argument that a person of skill could not ascertain the scope of the claim where the grammatical plain English is understandable. I will therefore construe “image resolutions” as the plural of the agreed-upon construction of “image resolution.”

### **3. “the co-ordinates of the data”**

- a. *Plaintiff’s proposed construction*: a distinct position in a given space such as a particular longitude, latitude, and elevation
- b. *Defendant’s proposed construction*: Indefinite
- c. *Court’s construction*: a distinct position in a given space

Defendant argues that both “data” and “co-ordinates” are indefinite. (D.I. 84 at p. 19). This term appears in four dependent claims, all of which depend from claim 1. (*Id.* at p. 20). Defendant argues that claim 1 recites four different types of data: (1) “space-related data,” (2) “data for the field of view,” (3) “higher-resolution space-related data,” and (4) “higher resolution image data.” (*Id.*). Defendant maintains that a person of skill in the art would be unable to determine which of these four types of data serves as the antecedent basis for “data” in the dependent claims. (*Id.* at p. 21).

Defendant further argues that “co-ordinates” is indefinite because the intrinsic record fails to identify which co-ordinate system is recited in the claim. (*Id.* at p. 22). Defendant argues that the scope of the claim changes dramatically depending on which system is claimed. (Tr.

50). In addition, Defendant argues that there is no antecedent basis for “co-ordinates” because it does not appear in any independent claim. (*Id.* at 49). Defendant also maintains that the language following “such as” in Plaintiff’s construction adds further ambiguity. (D.I. 84 at p. 22).

Plaintiff responds that the four types of data that Defendant identifies all refer to “data for the field of view.” (*Id.* at p. 23). Plaintiff notes that the Abstract and the preamble of claim 1 indicate that the claimed method is for providing a “pictorial representation of space-related data.” (*Id.*). Step (e) of claim 1 recites “representing the data for the field of view in a pictorial representation having one or more sections.” (’550 patent, col. 10, ll. 31-32). Plaintiff argues that, read together, the language makes clear that “space-related data” is “data for the field of view.” (*Id.* at p. 23). Plaintiff maintains that the other two types of data Defendant identifies are simply higher resolution data for the field of view. (*Id.* at p. 24).

With respect to co-ordinates, Plaintiff notes that Defendant admitted that the term refers, in the abstract, to positions in some co-ordinate system. (*Id.*). Plaintiff argues that it is not required to identify a particular co-ordinate system. (Tr. 41-42). To the extent that Defendant objects to the language following “such as,” Plaintiff has no objection to removing it. (D.I. 84 at p. 24).

I do not think the term is indefinite. I agree with Plaintiff that the four types of data are all “data for the field of view.” The data is described differently in different steps of the claim as the method advances. At the first use, the field of view has not been determined, so it is called “space-related data.” Once the field of view is determined, the space-related data is described as “data for the field of view.” Once the device has requested and received higher resolution data, the claim specifies that the data for the field of view in those steps has a higher resolution. With



respect to co-ordinates, Defendant admits that people of ordinary skill in the art understand what co-ordinates are. (Tr. 52). The claim does not need to be directed to a particular co-ordinate system. Because Plaintiff has no objection to removing the exemplary language in its proposed construction, I will construe the term as “a distinct position in a given space.”

#### **4. “quadrant tree”**

- a. *Plaintiff's proposed construction*: a data structure where each node has four children
- b. *Defendant's proposed construction*: a tree structure organization of a two-dimensional space in which a square is recursively subdivided into four equally sized squares
- c. *Court's construction*: a data structure where each node has four equally sized children

#### **5. “octant tree”**

- a. *Plaintiff's proposed construction*: a data structure where each node has eight children
- b. *Defendant's proposed construction*: a tree structure organization of a three-dimensional space in which a cube is recursively subdivided into eight equally sized cubes
- c. *Court's construction*: a data structure where each node has eight equally sized children

The issues and arguments with respect to these terms are the same, so I will address them together. There are two main disputes: (1) whether the quadrant tree must start with a square/the octant tree must start with a cube, and (2) whether the quadrant tree must represent only a two-dimensional space/the octant tree must represent only a three-dimensional space. (Tr. 57-58). For the sake of simplicity, I will address the arguments in reference to “quadrant tree.” Plaintiff clarified at oral argument that it did not take issue with construing the subdivisions to be equally sized. (*Id.* at 54-55).

Plaintiff maintains that nothing in the patent limits quadrant trees to a two-dimensional space. The specification states that quadrant trees are “suitable” for objects viewed in a plane. ('550 patent, col. 3, ll. 66-67). Plaintiff argues that “suitable” does not mean “required.” (D.I.

84 at p. 29). Plaintiff further argues that Figures 10 and 11 disclose three-dimensional representations generated by a method using a quadrant tree. (Tr. 61). Plaintiff also notes that Defendant's expert wrote an article in 1991 describing a quadrant tree composed of triangular sections representing a three-dimensional figure. (*Id.* at 62-63). Plaintiff argues that Defendant's expert therefore undermines his own argument that the nodes must be square and the quadrant tree must represent two-dimensional figures. (*Id.* at 63).

Defendant argues that the specification discloses a quadrant tree with square sections of equal size. (D.I. 84 at p. 30). For example, the specification states, "Call-up of the data is effected in this example always with the same resolution of 128 x 128 points." (*Id.* (quoting '550 patent, col. 8, ll. 60-63)). Defendant also provides extrinsic evidence to support its construction. The 1995 Dictionary of Computer Graphics and Virtual Reality defines "quadtree"<sup>2</sup> as "a tree structure organization of two-dimensional space, starting with a square and recursively subdividing each square into four equal squares, down to the smallest squares, pixels." (*Id.* at p. 31). Defendant argues that the intrinsic record is consistent with this definition, which demonstrates that a quadrant tree has square sections and is two-dimensional. (Tr. 66-67).

I think that Defendant's construction impermissibly reads in limitations from the specification. It is true that the specification discloses square sections, but there is nothing to indicate that the claims are limited to a model using square sections. The only intrinsic support Defendant offers to demonstrate that a quadrant tree must be two-dimensional and an octant tree must be three-dimensional is that the figures depicting those models are two- and three-dimensional, respectively. The primary basis of Defendant's construction seems to be a

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<sup>2</sup> Plaintiff does not dispute that "quadtree" and "quadrant tree" are interchangeable.

dictionary definition that is consistent with some disclosures in the specification. Plaintiff, however, provided a scholarly article that contradicts the limitations in Defendant's construction. There is nothing in the patent indicating that the claims are limited to the disclosures Defendant cites and the extrinsic evidence is contradictory. I will therefore adopt Plaintiff's construction, modified to indicate that the sections are equally sized.

**6. "polygonal grid model"**

- a. *Plaintiff's proposed construction*: a model of an object that represents the object's surface using a mesh of polygons that generally form a grid
- b. *Defendant's proposed construction*: a model of an object that represents the object's surface using a mesh of polygons that form a grid
- c. *Court's construction*: a model of an object that represents the object's surface using a mesh of polygons that form a grid

Plaintiff agreed to adopt Defendant's construction at oral argument. (Tr. 75). I will therefore construe the term as "a model of an object that represents the object's surface using a mesh of polygons that form a grid."

**7. "requesting data for the field of view from at least one of the plurality of spatially distributed data sources"**

- a. *Plaintiff's proposed construction*: plain and ordinary meaning
- b. *Defendant's proposed construction*: requesting data by specifying the selected distance and the angle of view of the observer to the object from at least one of the spatially distributed data sources
- c. *Court's construction*: plain and ordinary meaning

Plaintiff notes that the dispute with respect to this term centers on "requesting data for the field of view." (Tr. 76). Plaintiff argues that there is nothing confusing about requesting data. (*Id.*). Plaintiff argues that Defendant's construction does not clarify the term and "imposes an unwarranted restriction on the plain and ordinary meaning of the language." (D.I. 84 at p. 39).

Defendant's construction imposes requirements on what the request must include, which Plaintiff maintains are not disclosed in the specification. (Tr. 77). Plaintiff argues that Defendant is conflating steps (b) and (c) of claim 1. (D.I. 84 at p. 40). Step (b) calls for determining the field of view based on a selection of a distance and an angle of view of the observer to the object. (*Id.*). Step (c) calls for requesting data based on the field of view. (*Id.*). Plaintiff argues that the patent does not require the distance and angle to be part of the request once the field of view is determined in step (b). (*Id.* at pp. 40-41).

Defendant responds that the specification provides no parameters for the request other than the distance and angle used to determine the field of view. (Tr. 89-90). Defendant argues that the claim language and the specification support its construction because both require the field of view to be determined based on the distance and angle of the observer to the object. (D.I. 84 at pp. 41-42). Defendant maintains, "A POSITA would expect at least these parameters to be necessary for the claimed request. (*Id.* at p. 40).

This term does not require construction. There is nothing confusing about "requesting data." Defendant admits that the specification is silent as to how the data is called up from the spatially distributed data sources. (Tr. 89-90). There is therefore no basis to take language from a different step of the claimed method and import it into this term. All of Defendant's citations to the specification relate to how the field of view is determined, not the contents of the request. The plain and ordinary meaning applies.

#### **8. "space-related data"**

- a. *Plaintiff's proposed construction*: data related to a geographical location
- b. *Defendant's proposed construction*: displayable data related to a geographical location
- c. *Court's construction*: data related to a geographical location

The dispute with respect to this term is whether the space-related data must be displayed. This issue also arises in another disputed term, “representing the data for the field of view in a pictorial representation having one or more sections.” I think that whether the space-related data are displayed is better addressed in that term. Adding “displayable” here does nothing to clarify the meaning of “space-related data.” Defendant indicated at oral argument that it added “displayable” to this term as “belt and suspenders,” and did not object to addressing whether the data is displayable in the later term. (Tr. 108-09). I will therefore address it below in term eleven.

#### **9. “plurality of spatially distributed data sources”**

- a. *Plaintiff’s proposed construction*: plain and ordinary meaning
- b. *Defendant’s proposed construction*: two or more separate networked data sources
- c. *Court’s construction*: a plurality of geographically separate data sources

Plaintiff argues that Defendant is reading out the requirement that the data sources be in geographically separate locations and reading in a limitation that the data sources be networked. (D.I. 84 at p. 48). Plaintiff maintains that the specification repeatedly discloses data sources that are in different locations. (*Id.*). For example, Figure 11 shows temperature data that “were called up and transmitted through the interchange network from various meteorological research stations at various points.” (Tr. 118). Plaintiff argues that such research stations are all over the globe, not in the same building. (*Id.* at 117-18). Defendant’s use of the word “separate” would allow data sources that are side-by-side, which Plaintiff argues the patent does not contemplate. (*Id.* at 113). Plaintiff argues that one of the key advantages of the invention is that it can access data from all around the world, such that information about Japan, for example, comes from Japan and is more up-to-date than sources in Europe or the United States. (*Id.* at 114).

Plaintiff further argues that there is no requirement that the data sources be networked. (D.I. 84 at p. 48). While the data sources are capable of communicating over a network, Plaintiff argues that they are not necessarily networked to each other. (Tr. 119). Plaintiff notes that the specification discusses a data transmission network, and the applicants thus knew how to use the word “networked.” (*Id.*). They did not do so when describing the data sources. (*Id.*).

Defendant argues that the physical location of the data sources is not restricted, and they need not necessarily be geographically separate. (D.I. 84 at p. 49). Defendant argues that its construction includes data sources that are at separate locations, consistent with the embodiments Plaintiff cites to, but does not require that the data sources be remote from one another. (Tr. 121). In addition, Defendant argues that the data sources must be networked, as that is the only disclosed means of transmitting data. (D.I. 84 at p. 53).

While I do not think that “spatially distributed data sources” has a clear plain and ordinary meaning, I otherwise agree with Plaintiff’s argument. The specification consistently describes data sources that are geographically separate. It notes, for example, that “data are called up, generated and/or stored in a spatially distributed manner.” (’550 patent, col. 2, ll. 54-55). One of the advantages of the invention is that information is received from data sources close to the point of interest, such that data is more precise. (*Id.* col. 6, ll. 59-65). Because the location of interest can be anywhere, the data sources must also be spread out. In the prosecution history, the applicants described data “stored in a distributed system.” Defendant’s construction does not give meaning to “spatially distributed.” Immediately adjacent data sources could be separate, but they are not spatially distributed.

In addition, I do not think that the patent requires the data sources to be networked to each other. Certainly they communicate data to the device over a network, but it does not follow

that they must be connected to each other over a network. I will therefore construe the term as “a plurality of geographically separate data sources.”

**10. “determining the data and/or the coordinates of the data in terms of a new co-ordinate system” / “determining the data or the co-ordinates of the data in terms of a new co-ordinate system”**

- a. *Plaintiff’s proposed construction*: plain and ordinary meaning
- b. *Defendant’s proposed construction*: Indefinite
- c. *Court’s construction*: plain and ordinary meaning

The parties did not provide separate argument for this term. Defendant contends it is indefinite for the same reasons that term three, “co-ordinates of the data,” is indefinite. Plaintiff disagrees for the same reasons addressed above. As with term three, I do not find this term indefinite. Because no alternate construction has been proposed, the term will be given its plain and ordinary meaning.

**11. “representing the data for the field of view in a pictorial representation having one or more sections”**

- a. *Plaintiff’s proposed construction*: plain and ordinary meaning (with “sections” meaning “sub-divisions of the pictorial representation to be displayed”)
- b. *Defendant’s proposed construction*: displaying an image of the data for the field of view having one or more sections
- c. *Court’s construction*: displaying the data for the field of view in a pictorial representation having one or more sections

Plaintiff argues that claim 1 does not require that data be displayed. (Tr. 125). Plaintiff maintains that the data will ultimately be displayed, but claim 1 focuses on obtaining and processing the data so that it is ready for display. (*Id.*). Plaintiff notes that the step of the method in which this term appears is focused on sectionalizing the data, not displaying it. (*Id.* at 127). Plaintiff also argues that the data need not be an image, as Defendant suggests. (D.I. 84 at

p. 56). Plaintiff maintains that some data must be processed and formatted before being presented to the user, so the raw data itself is not necessarily ultimately displayed. (*Id.*).

Defendant argues that “representing the data” requires display. (*Id.* at p. 55). Defendant argues that the specification repeatedly discloses displaying an image. For example, it recites, “After each transmission and central storage of data, an image representation results . . . .” (’550 patent, col. 3, ll. 41-41). Defendant further argues that the specification does not disclose any embodiment where the method is performed without displaying an image to the user. (D.I. 84 at p. 56). Defendant maintains that its construction is not attempting to limit the display to raw data, such as satellite images. (*Id.* at p. 57). It argues that the construction does not require that the data be displayed without further processing, only that it must be displayed during the course of the method. (Tr. 101-02).

Notwithstanding Defendant’s representation that its construction is not limited to raw image data, I think the construction reads out data that must be processed before being displayed. I think a jury might interpret that construction to mean that tables, illustrations, and other representations of space-related data that require further processing before display are not included. Furthermore, I think the use of “image” could be interpreted as limiting the display to pictures.

I do agree, however, with Defendant’s argument that the data must be displayed in some fashion. In the prosecution history, the applicants explained, “Claim 1 of the applicants[’] invention teaches a method to store, retrieve *and display* space related data of a selectable object with a preset image resolution.” (D.I. 84-3 at p. 7 (emphasis added)). In addition, some dependent claims indicate that representing the data involves displaying it. For example, claim 25 adds, “wherein the representation in the steps (e) and (f) is in the form of a globe.” (’550



patent, col. 11, ll. 60-62). Claim 26 adds, “wherein the representation in the steps (e) and (f) is in the form of cartographic form of representation.” (*Id.* col. 11, ll. 63-65). These dependent claims indicate that the representing step at issue here includes some form of display.

I will construe the term as “displaying the data for the field of view in a pictorial representation having one or more sections.” I think this construction captures the requirement that the data be displayed, but allows for processing and does not require the display to be an image.

**12. “dividing each of the one or more sections having image resolutions below a desired image resolution into a plurality of smaller sections, requesting higher resolution space-related data for each of the smaller sections”**

- a. *Plaintiff’s proposed construction*: logically dividing each of the one or more sections having image resolutions below a desired image resolution into a plurality of smaller sections, requesting higher resolution space-related data for each of the smaller sections
- b. *Defendant’s proposed construction*: dividing each of the one or more sections having image resolutions below a desired image resolution into a plurality of smaller sections, prior to requesting higher resolution space-related data for each of the smaller sections
- c. *Court’s construction*: dividing each of the one or more sections having image resolutions below a desired image resolution into a plurality of smaller sections, prior to requesting higher resolution space-related data for each of the smaller sections

The primary dispute with respect to this term is whether a section must be divided into smaller sections before higher resolution data for the smaller sections is requested. Plaintiff argues that, because the division is performed using a computer, the “dividing” and the “requesting” can occur sequentially, simultaneously, or in parallel. (D.I. 84 at p. 59). Plaintiff argues that nothing in the patent requires that the steps be performed in order. (*Id.*).

Defendant argues that where a step of a method claim refers to the completed results of a prior step, the steps must be performed in order. (*Id.* at 60 (citing *E-Pass Technologies, Inc. v. 3Com Corp.*, 473 F.3d 1213, 1222 (Fed. Cir. 2007))). The “dividing” step involves dividing

certain sections into “a plurality of smaller sections.” (*Id.*). The “requesting” step involves requesting higher resolution data “for each of the smaller sections.” (*Id.* at pp. 60-61).

Defendant argues that the “smaller sections” for which data is requested do not exist until the “dividing” step occurs, and the steps must therefore be performed in order. (*Id.* at p. 61).

Defendant also argues that there is no support for Plaintiff’s contention that the “dividing” step is a logical division. (*Id.* at 62).

I find that the steps must occur in order. The device cannot request higher resolution data for a “smaller section” before that section exists. In addition, the specification teaches that after a section is divided, an investigation is carried out to determine whether it has the desired resolution. (’550 patent, col. 2, ll. 28-40). Further data is requested only if the investigation determines that the image resolution is insufficient. (*Id.*). The request must therefore come after the division.

Both parties’ arguments regarding whether the division is logical are conclusory. In addition, I do not see how it would be helpful to the jury. I will therefore not include it in the construction.

**13. “repeating step (f), dividing the sections into smaller sections, until every section has the desired image resolution or no higher image resolution data is available”**

- a. *Plaintiff’s proposed construction*: repeating step (f), logically dividing the sections into smaller sections, until every section has the desired image resolution or no higher image resolution data is available
- b. *Defendant’s proposed construction*: Indefinite
- c. *Court’s construction*: repeating step (f), dividing the sections into smaller sections, until every section has the desired image resolution or no higher image resolution data is available

Defendant argues that this term is indefinite because the patent provides no guidance as to what constitutes the “desired image resolution.” (D.I. 84 at p. 65). It argues that a person of

skill in the art would not understand how the “desired image resolution” is determined. (*Id.*).

Plaintiff responds that it is not required to claim a specific number. (*Id.* at p. 66). The “desired image resolution” is the resolution the software uses when deciding whether to subdivide further. (*Id.*).

I do not think this term is indefinite. The specification discloses that the image resolution is “pre-selected.” (’550 patent, col. 2, l. 6). It seems clear that the selected image resolution is the desired image resolution.

**14. “wherein the space-related data are provided with references to thematically adjacent data”**

- a. *Plaintiff’s proposed construction:* plain and ordinary meaning
- b. *Defendant’s proposed construction:* Indefinite
- c. *Court’s construction:* wherein the space-related data are provided with references to data on other topics, but with the same spatial association

Defendant argues that this term is indefinite because a person of skill in the art would be unable to determine the meaning of “thematically adjacent data.” (D.I. 84 at p. 69). Defendant maintains that “adjacent” is generally used to describe a physical location, whereas “thematic” generally refers to subject matter. (*Id.*). Defendant argues that a person of skill would therefore be unable to understand how one theme could adjoin another. (*Id.*).

Plaintiff responds that the specification distinguishes between “data of adjacent sections” and “data on other topics, but with the same spatial association.” (*Id.* at p. 68). The specification states,

The individual sections have references 16 to the storage point both of the data of adjacent sections and also of the data on other topics, but with the same spatial association. In this way, proceeding from the data of a section, data relating to the adjacent section or further data over the same section can be determined.

(’550 patent, col. 9, ll. 27-32). Plaintiff argues that “thematically adjacent data” refers to “data on other topics, but with the same spatial association” and “further data over the same section.” (D.I. 84 at p. 68). Such data includes image data, temperature data, or elevation data. (*Id.*).

I do not think this term is indefinite, but I also do not think it has a plain and ordinary meaning. Plaintiff in effect argues that the term should be construed as “data on other topics, but with the same spatial association.” Despite the odd phrasing, I think that a person of skill would be able to determine that “thematically adjacent data” refers to the specification language that Plaintiff identifies. I will therefore construe the term as “wherein the space-related data are provided with references to data on other topics, but with the same spatial association.”

#### **IV. CONCLUSION**

Within five days the parties shall submit a proposed order consistent with this Memorandum Opinion suitable for submission to the jury.